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SOURCE Informativni priručnik o Jugoslaviji; Book 1, Sections 14-15, 1951.

RAILROAD TRANSPORTATION IN YUGOSLAVIA, (1932 - 1950)

The following report is one of several taken from Informativni priracnik o Jugoslaviji, a handbook published irregularly since late 1948 by the Yugoslav Directorate for Information.

Railroad Transportation, 1932 - 1948

Railroads are the basic and most important means of transportation in Yugoslavia, constituting 85 percent of all means of transportation.

The prewar Yugoslav railroad network was 9,678.2 kilometers long; in 1948, it was 11,482.1 kilometers long. The following shows the length of railroad lines from 1932 to 1948.

<u>Year</u>	<u>Km of Railroad</u>
1932	9,362.7
1933	9,272.1
1934	9,373.0
1935	9,388.7
1936	9,437.6
1937	9,465.8
1938	9,545.8
1939	9,648.2
1940	9,648.2
1941	9,655.5
1942	9,678.2
1944	5,271.0
1945	9,839.6
1946	10,296.9
1947	10,976.1
1948	11,482.1

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From 1941 to 1945, the enemy caused heavy damage to railroad lines (64 percent of which were destroyed), bridges (60 percent), and locomotives and railroad cars (about 70 percent). The total damage to railroads amounted to 25 billion dinars, not including the loss in railroad efficiency.

Passenger Transportation

At the end of 1939, the volume of passenger transportation was about 3,250,000,000 passenger-kilometers. The railroads had 5,617 passenger cars at their disposal at that time. After the liberation, the volume of passenger transportation started to increase rapidly, with a resulting disproportion between transportation facilities available and the number of passengers to be accommodated. In 1948, the volume was almost 5,500,000,000 passenger-kilometers, while there were 950 fewer passenger cars than in 1939.

Three basic reasons for the increase in the number of passengers were the following:

1. The rapid rate of construction in Yugoslavia required extensive mobilization of manpower. Since housing could not be provided near places of employment, workers have had to commute to work every day. Members of a worker's family have often traveled for the same reason.
2. Paid vacations for the working people and other benefits for them and their families allow them to spend vacations in various parts of the country, which has also increased the number of passengers over the prewar average.
3. Relatively low passenger transportation rates in relation to considerably increased postwar wages.

The number of passengers transported and the number of passenger cars was as follows:

<u>Year</u>	<u>Pass Transported</u> (millions)	<u>Pass Cars</u> (thousands)
1932	36.4	5,166
1933	32.9	5,200
1934	31.6	5,170
1935	39.7	5,135
1936	45.9	5,108
1937	54.7	5,134
1938	59.3	5,130
1939	61.6	5,167
1940	--	5,126
1945	--	1,587
1946	78.4	3,592
1947	110.5	3,881
1948	154.0	4,219

A constantly increasing volume of passenger transportation necessitates providing more comfortable passenger transportation, although domestic industry will not be able to construct passenger cars in the required quantities in the near future. Consequently, maximum circulation of passenger cars (through better scheduling and more rapid cleaning and maintenance), decreasing time spent on repairs, and restoration of war-damaged equipment are necessary, as is the construction of new passenger cars.

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Freight Transportation

At the end of 1939, the volume of freight transportation was about 4,700,000,000 ton-kilometers; it had increased to 7,500,000,000 in 1948, although transportation facilities were in worse condition than before the war. This large increase was made possible only through the better utilization of available transportation facilities.

The increased amount of freight traffic is the result of increased domestic transportation, for Yugoslavia has not yet reached the prewar level in international transportation. Transit traffic through Yugoslavia (between western and central European countries, and Greece, Turkey, and the Near East) was greatly reduced.

Freight traffic in 1939 compared with 1948 was as follows:

	1939 (tons)	1948 (tons)	Increase in 1948 Over 1939 (%)
Coal	5,117	9,437	184
ores	827	1,256	152
Products of ferrous and nonferrous metallurgy	409	760	156
Raw and processed lumber	2,046	3,483	170
Firewood	1,599	1,722	107
Cement and gypsum	294	895	303
Other construction material	2,854	6,327	222
Grain and grain products	1,431	1,821	127
Sugar beets	741	1,068	144
Other goods	5,822	9,831	169

In 1948, freight transportation had increased 79 percent and passenger transportation 160 percent over 1938, although rolling stock and technical installations did not satisfy Yugoslav needs. Such significant increases were achieved only through proper utilization of transportation facilities, better work organization, and the utmost cooperation of railroad employees.

Taking 1938 as 100, the index listed below shows how facilities were better utilized, without increasing their number:

	1948
Freight transportation (tons)	175
Freight transportation (carloads)	163
Average hauling distance of freight (kilometers)	104
Average distance traveled by passengers (kilometers)	83
Number of passengers transported	260
Freight car axle load (tons)	115
Work productivity per employee	125
Turnaround time of freight cars	60
Average carload (tons)	125

The Five-Year Plan calls for 53,200,000 tons of freight to be transported in 1951. However, freight transportation in 1951 will be close to 62 million tons, which means the transportation plan will be surpassed about 17 percent.

Yugoslavia cannot count on buying numbers of freight cars and locomotives abroad, nor expect domestic industry to be able to satisfy requirements for transportation facilities. This means that Yugoslavia must turn to better

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utilization of freight cars, further reduction in hauling time, use of through freight wherever possible for coal, lumber, etc., reduction of loading and unloading time, and introduction of loading and unloading on Sundays, holidays, and at night.

Railroad Transportation in 1950

Passenger Transportation

In 1950, the number of passengers transported increased to 179 million, or 62 percent more than in 1947. The number of passenger-kilometers traveled was 8.3 billion, or 63 percent more than in 1947.

In spite of considerable improvement in utilization of passenger cars, railroads were not able to provide comfortable accommodations for so many passengers.

Railroads did not increase their transportation facilities to meet the country's increased demand for transportation, but tried to find a solution by better utilization of existing capacities.

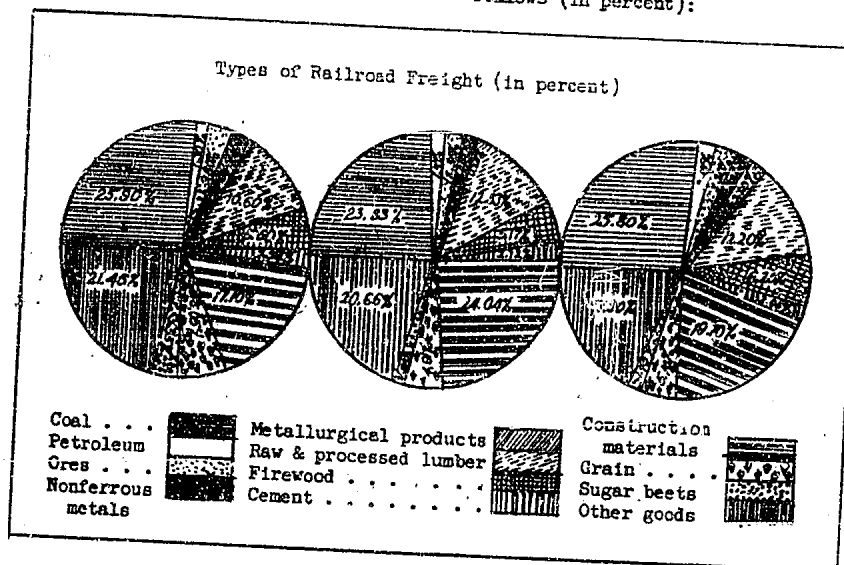
Improvement in utilization of passenger cars was as follows:

	1938	1947	1950
Axle-kilometers of passenger cars (millions)	536	445	629
Number of passenger cars	5,130	4,219	4,449

Freight Transportation

In 1950, the volume of freight traffic, which amounted to 45.9 million tons, was 71 percent more than in 1947.

Types of freight traffic were as follows (in percent):



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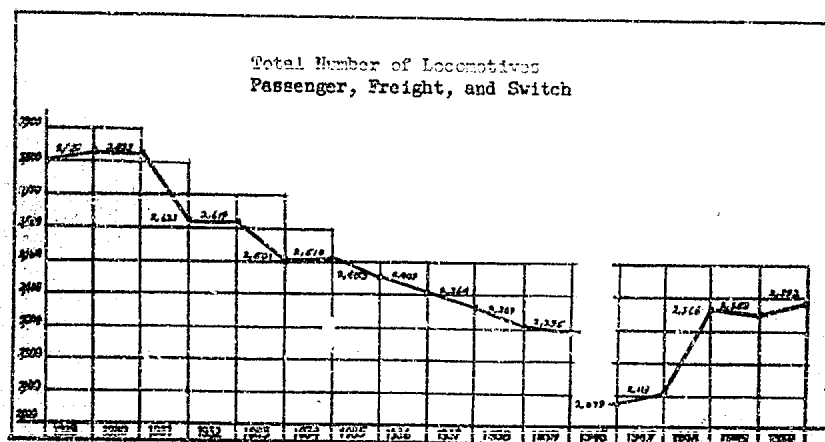
Haulage of freight was as follows:

	<u>1938</u>	<u>1947</u>	<u>1950</u>
Net ton-kilometers (billions)	4.2	5.5	10.2
Gross ton-kilometers (billions)	10.5	11.7	18.7
Gross weight per freight train (tons)	383	504	533
Kilometers traveled (millions)	27.8	25.7	34.0

Exploitation of freight cars was as follows:

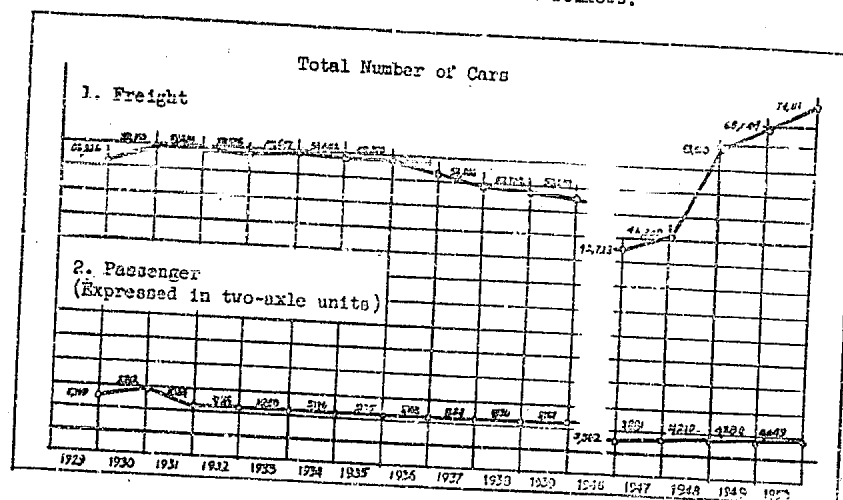
	<u>1938</u>	<u>1947</u>	<u>1950</u>
Average number of cars loaded daily	5,469	6,006	9,240
Number of freight cars	53,254	46,509	74,111

The total number of locomotives was as follows:

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The total number of railroad cars was as follows:



The number of passenger cars was expressed in two-axle units, one Pullman passenger car on express trains being counted as two cars. The railroad administration would need at least 1,000 more passenger cars to provide comfortable and modern transportation.

In 1950, a movement developed to haul heavier trains and to extend the length of time between washing and repairing rolling stock. In spite of lack of material, the percentage of locomotives under repair decreased.

In 1950, through improving the condition of locomotives, utilization of lower-grade coal, and a gradual, although not yet satisfactory, increase in coal reserves needed for mixing coals, the consumption of coal was reduced 15 percent over 1946. However, coal consumption still did not decrease to prewar level, when railroads were using high-grade coal.

The condition of railroad tracks, which is still unsatisfactory; the old age of railroad cars and locomotives; and the lack of air-braking equipment did not permit speeds customary in other countries. With the installation of air brakes in 1950, and improvement of tracks, higher speeds were introduced in 1951, but they are still slower than on other European railroads.

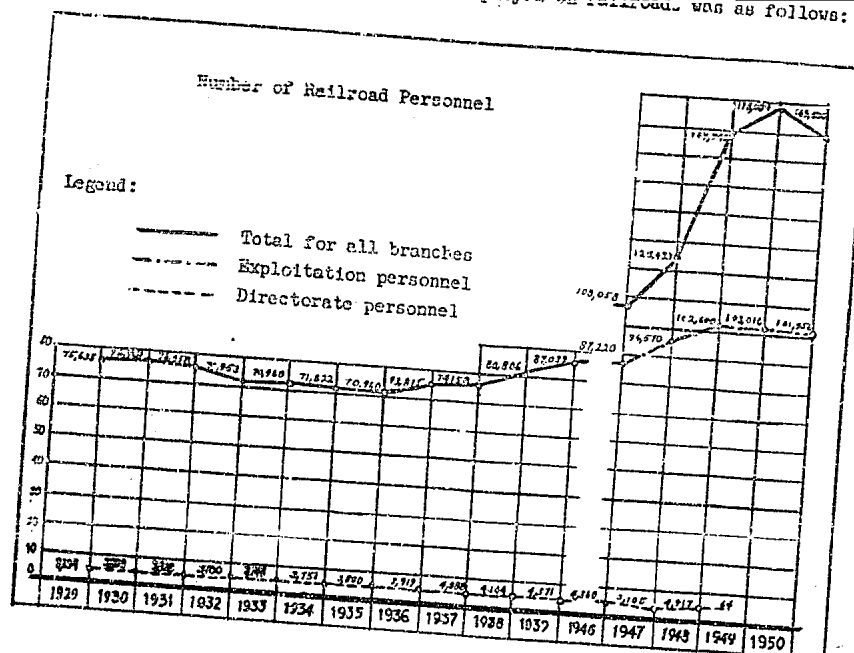
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the total number of personnel employed on railroad was as follows:



The postwar increase in personnel includes personnel employed in railroad construction. Such personnel were not on the railroad payroll before the war. Furthermore, railroads operate dining and sleeping cars, which were privately operated before the war. The number of employees in railroad repair shops has also increased. In addition, 905 kilometers of private railroads became state property in 1946, and 366 kilometers of railroads in maritime Slovenia and Istria were acquired in 1947, thus increasing the number of railroad personnel still further.

Railroad Lines

The length of the network increased to 11,614 kilometers of railroad in 1950.

In addition to the construction of the regular network, the following railroad trackage was constructed:

Industrial railroads	Year	Kilometers
	1946	26
	1947	69
	1948	100
	1949	112
	1950	86
		<u>393</u>

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	<u>Year</u>	<u>Kilometers</u>
Station tracks	1946	112
	1947	110
	1948	60
	1949	121
	1950	55
		558
Second tracks	1946	--
	1947	36
	1948	131
	1949	152
	1950	--
		319

Railroad lines under construction and not yet completed are not shown.

Of the 11,614 kilometers of railroads in Yugoslavia, 10,745 kilometers are single track, 684 kilometers are double track, 33 kilometers are three-rail track, 6.4 kilometers are four-rail track and 13.6 kilometers are cog railway. Yugoslavia has 8,451 kilometers of standard-gauge railroad, 203 kilometers of one-meter narrow-gauge railroad, 3,594 kilometers of 76-centimeter narrow-gauge railroad, 41 kilometers of 75-centimeter narrow-gauge railroad, and 324 kilometers of 60-centimeter narrow-gauge railroad. Double track, station, and industrial track total 16,307 kilometers.

Track for receiving incoming and outgoing trains totals 1,535 kilometers; reloading and warehouse tracks, 755 kilometers; switchyard tracks, 416 kilometers; tracks in locomotive shops, 253 kilometers; tracks in repair shops, 124 kilometers; tracks in gravel pits, 33 kilometers; tracks in quarries, 22 kilometers; tracks in establishments for the impregnation of railroad ties, 10 kilometers; industrial track, 592 kilometers; other track, 315 kilometers; and separate railroads in joint exploitation, 131 kilometers. The gauge differences which necessitate reloading hinder the speed of freight transportation.

In the future, the Railroad Administration plans to construct standard-gauge tracks and dismantle narrow-gauge track wherever possible. In 1950, wherever narrow-gauge track was dismantled, the same length of standard-gauge track was being laid.

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